

7034A: Implementing Microsoft®  
Office Live Communications  
Server™ 2005 (SP1)

Microsoft Virtual PC  
Classroom Setup Guide

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# 7034A: Implementing Microsoft Office Live Communications Server 2005 (SP1) VPC Setup Guide

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## Introduction

Welcome to the Virtual PC (VPC) setup guide for *Course 7034: Implementing Microsoft Office Live Communications Server 2005 (SP1)*. This document explains how to set up Course 7034 in a classroom environment.

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**Important** You must read these instructions carefully, particularly with reference to which VPC images should be used. If VPC images are missing, student satisfaction will be significantly affected. You should also read the contents of the 7034A\_ReadMe.txt file that is part of this course.

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There is no instructor DVD provided for this course, as this course is available as a download only. However, your training center may have created some DVDs for the course. This course requires at least four DVDs to contain all the content.

## Introducing Microsoft Virtual PC 2004

This course is designed using Microsoft® Virtual PC 2004. Virtual PC is a technology that allows a single computer to act as a host for one or more virtual machines. The virtual machines use a set of virtual devices that might or might not map to the physical hardware of the host computer.

The software that is installed onto the virtual machine is unmodified, full-version, retail software that operates exactly as it does when it is installed onto physical hardware.

The following definitions will help you with the remainder of this document:

- **Virtual PC.** An application from Microsoft that allows you to install and run other operating systems. Virtual PC does not ship with this course, but it can be acquired from your MSDN subscription, or can be purchased from a retail outlet.
- **Host computer.** The physical computer onto which an operating system and the Virtual PC application have been installed.
- **Host operating system.** The operating system that is running on the physical computer.

- **Virtual machine.** The computer that is running inside of Virtual PC. In this document, “Virtual PC” refers to the application running on the host, while “virtual machine” refers to the guest operating system and any software that is running inside of the Virtual PC application.
- **Guest operating system.** The operating system that is running inside the virtual machine.
- **Host key.** The key that is designated to take the place of the CTRL+ALT combination when logging on to Microsoft Windows®. By default, the host key is the ALT key on the right side of the keyboard, so HOST+DELETE means RIGHT-ALT+DELETE. The host key can be changed by clicking the File menu in the Virtual PC console, and selecting Options. See Virtual PC online help for other uses of the host key.

By default, the virtual machine will run inside a window on the host computer’s desktop. However, you can run the virtual machine in full-screen mode by pressing HOST+ENTER. Using the same key combination, you can toggle between full-screen and windowed views.

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**Note** Pressing CTRL+ALT+DELETE while working with a virtual machine will display the Windows Security dialog box for the host operating system. If this is not desired, press ESC. To access the Windows Security dialog box for a guest operating system, press HOST+DELETE. This is the only difference in the way the software works in a virtual machine.

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You can configure virtual machines to communicate with the host computer, other virtual machines on the same host computer, other host computers, virtual machines on other host computers, other physical computers on the network, or any combination of these.

The setup instructions that you will follow as a part of this classroom setup guide will configure Virtual PC and the virtual machines that will run on the host. Changing any of the configuration settings may render the labs for this course unusable.

## Setup Overview

The host computers must be set up with a default installation of either Windows 2000 Professional, or Windows XP Professional. For the purposes of this course, it is not necessary for the host computers to be able to communicate with each other on the network. However, allowing them to communicate with each other is recommended for ease of setup. The setup procedures below assume that the host computers can communicate with each other for setup purposes. You should make note of the administrator user name and password, and provide this to the instructor.

## Classroom Requirements

This course requires a classroom with a minimum of one computer for the instructor, and one for each student. Before class begins, use the following information and instructions to install and configure all computers.

### Hardware

The hardware specification for both instructor and student computers on this course is CPLS Hardware Level 5 or higher.

- Pentium IV 2.4 gigahertz (GHz)
- PCI 2.1 bus
- 2 gigabyte (GB) of RAM
- 40-gigabyte (GB) hard disk, 7200 RPM
- Digital video disc (DVD) player
- Non-ISA network adapter: 100 megabits per second (Mbps) full duplex
- 16-MB video adapter (32 MB recommended)
- Super VGA (SVGA) monitor (17 inch)
- Microsoft Mouse or compatible pointing device
- Sound card with amplified speakers

In addition, the instructor computer must be connected to a projection display device that supports SVGA 800x600 pixels, 256 colors.

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**Note** The network cards should be connected to a switch rather than a hub. A switch will speed up the process of copying files to the student computers.

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### Software

This course was developed and tested on the following software, which is required for the classroom computers:

- Windows XP Professional or Windows 2000 Professional
- Virtual PC 2004
- Microsoft PowerPoint® 2003 (instructor computer only)

Please note that, unless otherwise indicated, this software is not included as part of the course download.

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# Instructor Computer Checklist

Estimated time to set up the classroom: 180 minutes

- 1. Install Virtual PC.
- 2. Install the virtual disk files.
- 3. Create a desktop shortcut for Virtual PC.
- 4. Add virtual machines.
- 5. Set base VHDs to read-only.
- 6. Copy the course files into the Tools folder.
- 7. Activate the virtual machines.
- 8. Create setup shares.
- 9. Install courseware fonts.
- 10. Install the PowerPoint slides.
- 11. Install the Macromedia Flash 6.0 Plug-in.

## Instructor Computer Setup

Use the instructions in the following section to set up the classroom manually. Before starting the installation of the instructor computer, Windows 2000 Professional or Windows XP Professional must be installed on the computer. PowerPoint 2003 must also be installed.

The operating systems installed on the virtual machines in this course have not been activated. To receive product keys that will activate the virtual machines, you must contact Microsoft Learning by e-mail at [mslpkd@microsoft.com](mailto:mslpkd@microsoft.com), and include your program ID number in your message. **It might take up to 24 hours to receive a response.**

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**Note** It is not necessary to contact Microsoft Learning if you have already done so for another course.

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You will use the product keys to activate all virtual machines that you receive from Microsoft Learning. You will only need one key for each operating system. For more information, please see the “Virtual PC Deployment Guide” section of the following Microsoft Certified Trainer (MCT) secure site: <https://partnering.one.microsoft.com/mct/vpc/default.aspx>.



## 1. Install Virtual PC

**Task Summary**  
Install Virtual PC.

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**Note** If Virtual PC 2004 is already installed, you may skip this step.

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1. Insert the Microsoft Virtual PC 2004 compact disc (CD) into the CD-ROM drive.
2. If autorun is disabled, navigate to the root of the CD, and then double-click **Setup.exe**.
3. On the **Microsoft Virtual PC 2004 – InstallShield Wizard Welcome** page, click **Next**.
4. In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, and then click **Next**.
5. In the **Customer Information** dialog box, type a **User Name**, **Company Name**, and the product key for your version of Virtual PC, and then click **Next**.
6. On the **Ready to Install the Program** page, click **Install**.
7. On the **InstallShield Wizard Completed** page, click **Finish**.

## 2. Install the virtual disk files

**Task Summary**  
Install the virtual disks and configuration files by running the rar files in the Drives folder on the download location

1. Open the **\Setup\Drives** folder from the network share where the course files were downloaded.
2. Double-click **7034A-Client1-Base.exe**.

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**Note** If you experience long delays when opening the files from the network, copy the files to your local hard disk and open the files from there.

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3. In the **Official Microsoft Learning Products End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
4. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\Base** is listed, and then click **Install**.
  - Please wait while the base virtual hard disk file extracts. This might take a few minutes.
5. Repeat steps 3 – 5 for the following six files:
  - **7034A-FabrikamAP-Base.exe**
  - **7034A-FabrikamDC-Base.exe**
  - **7034A-LCSEESRV-Base.exe**
  - **7034A-NWTradersAP-Base.exe**
  - **7034A-NWTradersDC-Base.exe**
  - **7034A-Proxy01-Base.exe**
6. Double-click **7034A-Client1-B.exe** in the **\Setup\Drives** folder in the course download location.

7. In the **End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
8. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\7034\Drives** is listed, and then click **Install**.

Please wait while the differencing hard disk files and VPC configuration files are extracted. This process might take a few minutes.

9. Repeat steps 6 – 8 to install the following 17 files:

- **7034A-Client1-D.exe**
  
- **7034A-FabrikamAP-B.exe**
- **7034A-FabrikamAP-D.exe**
  
- **7034A-FabrikamDC-A.exe**
- **7034A-FabrikamDC-B.exe**
- **7034A-FabrikamDC-D.exe**
  
- **7034A-LCSEESRV-A.exe**
- **7034A-LCSEESRV-B.exe**
- **7034A-LCSEESRV-D.exe**
  
- **7034A-NWTradersAP-B.exe**
- **7034A-NWTradersAP-D.exe**
  
- **7034A-NWTradersDC-A.exe**
- **7034A-NWTradersDC-B.exe**
- **7034A-NWTradersDC-C.exe**
- **7034A-NWTradersDC-D.exe**
  
- **7034A-Proxy01-B.exe**
- **7034A-Proxy01-D.exe**

### 3. Create a desktop shortcut for Virtual PC

**Task Summary**

Create a shortcut for Virtual PC on the desktop.

1. Navigate to **C:\Program Files\Microsoft Virtual PC**.
2. Right-click and drag **Virtual PC.exe** to the desktop.
3. From the **Context** menu, select **Create Shortcut Here**.

### 4. Add virtual machines

**Task Summary**

Use the New Virtual Machine Wizard to add the virtual machine to the Virtual PC console.

1. Double-click the **Virtual PC** shortcut on the desktop.
2. On the **Welcome to the New Virtual Machine Wizard** page, click **Next**. (If the wizard does not automatically start, click **New**.)
3. On the **Options** page, select **Add an existing virtual machine**, and then click **Next**.
4. In the **Name and location** box, type **C:\Program Files\Microsoft Learning\7034\Drives\7034A-Client1-B.vmc**, and then click **Next**.
5. On the **Completing the New Virtual Machine Wizard** page, verify that **When I click Finish, open Settings** is selected, and then click **Finish**.
6. In the **Settings for 7034A-Client1-B** dialog box, select **Networking**, verify that the value of the **Number of network adapters** setting is **1**, verify that **Local only** is selected in the **Adapter 1** list, and then click **OK**. However, the **FabrikamAP** and **NWTradersAP** virtual machines should have **Number of network adapters** set to **2**, and both should be set to local

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**Important** Do not change the RAM allocation for the virtual machine. Doing so may cause the lab exercises or practices to become unstable or to cease functioning.

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7. Repeat steps 2–6 for the following 17 virtual machine(s):
  - **7034A-Client1-D.vmc**
  
  - **7034A-FabrikamAP-B.vmc (requires two network adapters)**
  - **7034A-FabrikamAP-D.vmc (requires two network adapters)**
  
  - **7034A-FabrikamDC-A.vmc**
  - **7034A-FabrikamDC-B.vmc**
  - **7034A-FabrikamDC-D.vmc**
  
  - **7034A-LCSEESRV-A.vmc**
  - **7034A-LCSEESRV-B.vmc**
  - **7034A-LCSEESRV-D.vmc**
  
  - **7034A-NWTradersAP-B.vmc (requires two network adapters)**
  - **7034A-NWTradersAP-D.vmc (requires two network adapters)**

- 7034A-NWTradersDC-A.vmc
  - 7034A-NWTradersDC-B.vmc
  - 7034A-NWTradersDC-C.vmc
  - 7034A-NWTradersDC-D.vmc
- 
- 7034A-Proxy01-B.vmc
  - 7034A-Proxy01-D.vmc

## 5. Set base VHDs to read-only

### Task Summary

Set the read-only attribute on all of the base VHD files.

1. Navigate to **C:\Program Files\Microsoft Learning\Base**.
2. Select all the **vhd** files in this directory. The files are:
  - **Client1.vhd**
  - **FabrikamAP.vhd**
  - **FabrikamDC.vhd**
  - **LCSEESRV.vhd**
  - **NWTradersAP.vhd**
  - **NWTradersDC.vhd**
  - **Proxy-01.vhd**
3. Right-click the files, and then click **Properties**.
4. Under **Attributes**, select the **Read-only** check box, and then click **OK**.

## 6. Copy the course files into the Instructor computer

### Task Summary

Copy the course supplementary files onto the instructor host computer.

1. In Windows Explorer, navigate to the **C:\Program Files\Microsoft Learning\7034** folder.
2. In the **C:\Program Files\Microsoft Learning\7034** folder, click **File**, point to **New**, and click **Folder**. A folder named **New Folder** appears.
3. In the **New Folder** name, type **Tools** to rename the folder to **Tools**.
4. Copy the files from the **Tools** folder on the network share folder that you used as the course download location into the **Tools** folder on the instructor host computer.
5. Copy the **Additional Materials** folder from the course download location into the **Tools** folder.
6. Check carefully that you now have a **C:\Program Files\Microsoft Learning\7034\Tools\Demo Files** folder with several sub-folders, populated with the software the students will need for the course. You should also have a **C:\Program Files\Microsoft Learning\7034\Tools\Additional Materials** folder, populated with additional reading the students will need for the course.
7. In the **C:\Program Files\Microsoft Learning\7034** folder, click **File**, point to **New**, and click **Folder**. A folder named **New Folder** appears.

8. In the **New Folder** name, type **Module 1 Demo** to rename the folder to **Module 1 Demo**.
9. Copy the files from the **Module 1 Demo** folder on the installation location into **C:\Program Files\Microsoft Learning\7034\Module 1 Demo**.
10. Close Windows Explorer.

## 7. Activate the virtual machines

### Task Summary

Activate Windows operating systems within the virtual machines.

This section requires the use of the product keys supplied by Microsoft Learning. For instructions on obtaining these product keys, see the Important note at the beginning of the Instructor Computer Setup section.

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**Note** We recommend that you save the virtual machines after you activate them, so that in the future, you can set up the classroom without needing to activate them again.

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1. In the Virtual PC console, select **7034A-Client1-B.vmc**, and then click **Start**.

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**Note** The first time you start a Virtual PC image, you may see a message **Error – ImageName. The virtual hard disk's parent appears to have been modified without using the differencing hard disk**. This message can be safely ignored. If you see this message, check the **Don't show this message again** box and click **OK**. This message can appear when running VPC images on computers in different time zones from the computer that initially created the differencing drive.

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2. Log on to the virtual machine as **Administrator**, with a password of **pass@word1**.

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**Note** Pressing CTRL+ALT+DELETE while working with a virtual machine will display the Windows Security dialog box for the host—not the guest—operating system. To log on to the guest operating system running in the virtual machine, press RIGHT-ALT+DELETE.

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3. In the **Windows Product Activation** alert box, click **Yes**.
4. On the **Let's activate Windows** page, select the **Yes, I want to telephone a customer service representative to activate Windows** radio button, and then click **Next**.
5. On the **Activate Windows by phone** page, click the **Change Product Key** radio button.

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**Note** You may need to scroll down the window to see these radio buttons.

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6. On the **Change Product Key** page, enter the course-specific product key provided by Microsoft Learning, and then click **Update**.
7. On the **Activate Windows by phone** page, in the **Step 1** drop-down list box, select your location.
8. Dial the telephone number that is displayed in **Step 2**.

9. Follow the telephone instructions to activate Windows. This will take a few minutes.
10. After logon is completed, in the **Virtual PC** window, from the **Action** menu, select **Close**.
11. In the **Close** window, select **<Shut down Windows Server 2003 and save changes>** or **<Shut down Windows XP and save changes>**, verify that **Commit changes to the virtual hard disk** is selected, and then click **OK**.
12. Repeat steps 1–11 for the following 17 virtual machine(s):
  - **7034A-Client1-D.vmc**
  
  - **7034A-FabrikamAP-B.vmc**
  - **7034A-FabrikamAP-D.vmc**
  
  - **7034A-FabrikamDC-A.vmc**
  - **7034A-FabrikamDC-B.vmc**
  - **7034A-FabrikamDC-D.vmc**
  
  - **7034A-LCSEESRV-A.vmc**
  - **7034A-LCSEESRV-B.vmc**
  - **7034A-LCSEESRV-D.vmc**
  
  - **7034A-NWTradersAP-B.vmc**
  - **7034A-NWTradersAP-D.vmc**
  
  - **7034A-NWTradersDC-A.vmc**
  - **7034A-NWTradersDC-B.vmc**
  - **7034A-NWTradersDC-C.vmc**
  - **7034A-NWTradersDC-D.vmc**
  
  - **7034A-Proxy01-B.vmc**
  - **7034A-Proxy01-D.vmc**

## 8. Create setup shares

### Task Summary

Share virtual machine files for installing on student computers.

1. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\Base**, and then click **Sharing** (on Windows 2000 Professional) or **Sharing and Security** (on Windows XP).
2. On the **Sharing** tab, select **Share this Folder**, type **Base\_Drives** in the **Share name** text box, and then click **OK**.
3. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\7034\Drives**, and then click **Sharing** (on Windows 2000 Professional) or **Sharing and Security** (on Windows XP).
4. On the **Sharing** tab, select **Share this Folder**, type **7034\_Drives** in the **Share name** text box, and then click **OK**.
5. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\7034\Tools**, and then click **Sharing** (on Windows 2000 Professional) or **Sharing and Security** (on Windows XP).
6. On the **Sharing** tab, select **Share this Folder**, type **7034\_Tools** in the **Share name** text box, and then click **OK**.
7. Close Windows Explorer.

## 9. Install courseware fonts

### Task Summary

Install courseware fonts by running Fonts.exe.

1. Click **Start**, and then click **Run**.
2. In the **Run** text box, type **X:\Setup\Fonts.exe** (where x is the drive letter of your mapped network drive or DVD-ROM drive), and then click **OK**.
3. In the **Courseware fonts** dialog box, click **Yes**.
4. In the **Courseware fonts** message box, click **OK**.

## 10. Install the PowerPoint slides

### Task Summary

Install PowerPoint slides by running 7034\_ppt.msi.

1. Click **Start**, and then click **Run**.
2. In the **Run** text box, type **X:\Setup\7034\_ppt.msi** (where X is the drive letter of your mapped network drive or DVD-ROM drive), and then click **OK**.

## 11. Install the Macromedia Flash 6.0 Plug-in

### Task Summary

Install the Flash 6.0 plug-in by running Flash6A.exe.

1. On the Instructor Materials download location, in the **\Setup** folder, double-click **Flash6A.exe**, and then click **OK**.
2. In the **Flash 6 ActiveX Control Installer** dialog box, click **Yes** to install the control.
3. When installation is complete, click **OK**.
4. Open Windows Explorer, browse to **C:\Program Files\Microsoft Learning\7034\Module 1 Demo** and double-click **LCS 2005 CTI Demo.exe**.
5. Check that the Demo runs successfully.

## Student Computer Checklist

- 1. Install Virtual PC.
- 2. Install the virtual disk files.
- 3. Create a desktop shortcut for Virtual PC.
- 4. Add virtual machines.
- 5. Install Microsoft Word Viewer 2003.



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## Student Computer Setup

To set up the student computers, complete the items in the Student Computer Checklist.

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**Caution** These instructions assume network connectivity between the instructor computer and the student computers. If you do not have connectivity, we recommend copying the activated virtual machines to the student computers via a burned DVD or USB drive, for example, to avoid the need to activate the virtual machines on each student computer. If you use the original virtual machines from the course download location, you will need to activate them on each student computer, and each student computer will require 18 activations.

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### 1. Install Virtual PC

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**Note** If Virtual PC 2004 is already installed, you may skip this step.

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- See detailed instructions in the Instructor Computer Setup section.

### 2. Install the virtual disk files

1. Copy the entire contents of the **Base\_Drives** folder from the \\InstructorComputer share to **C:\Program Files\Microsoft Learning\Base**.
2. Copy the entire contents of the **7034\_Drives** folder from the \\InstructorComputer share to **C:\Program Files\Microsoft Learning\7034\Drives**.
3. Copy the entire contents of the **7034\_Tools** folder into **C:\Program Files\Microsoft Learning\7034\Tools**. This copy process should create folders called **Demo Files** and **Additional Materials**.

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**Important** This copy operation will transfer 23GB of files across the network, which may take a significant amount of time.

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### 3. Create a desktop short cut for Virtual PC

- See detailed instructions in the Instructor Computer Setup section.

### 4. Add virtual machines

- See detailed instructions in the Instructor Computer Setup section.

## 5. Install Microsoft Word Viewer 2003

1. Download the Word Viewer Application from <http://www.microsoft.com/downloads/details.aspx?FamilyID=95e24c87-8732-48d5-8689-ab826e7b8fdf&displaylang=en> and save the wdviewer.exe file to a network location.
2. Run the wdviewer.exe setup program from the download folder and follow the on-screen instructions to install Word Viewer 2003.
3. Navigate to **C:\Program Files\Microsoft Learning\7034\Tools\Additional Materials** folder and double-click one of the Microsoft Word documents in that folder. Check that the document opens correctly.